THE

MEDICAL AND SURGICAL REPORTER.

No. 1220.] PHILADELPHIA, JULY 17, 1880. [Vol. XLIII.—No. 3.

ORIGINAL DEPARTMENT.

LECTURE.

IV. PULMONARY PHTHISIS.

Delivered at the Philadelphia Hospital, December 10th, 1879,

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REPORTED BY WM. H. MORRISON, M.D.

GENTLEMEN—To-day I wish to ask your attention to catarrhal phthisis, which is the outcome of catarrhal pneumonia, and depends upon the fact that the exudation, instead of being gradually removed by a process of softening and expectoration, passes more or less entirely into a state of cheesy change, that this has crumbled down, that the walls of the air vesicles have become involved, and thus the destructive process has been established in the lung. The first division that we must make of catarrhal phthisis is into the acute and chronic forms, and this depends upon two elements or chief reasons: first, upon the violence and extent of the original attack; and secondly, upon a weakness of the individual constitution, by which it yields more or less readily to the attack of disease. Thus, for instance, we have a form of catarrhal phthisis which, fortunately, is not very common, popularly termed galloping consumption, which is in reality a general catarrhal pneumonia, rapidly passing into a state of cheesy degeneration. In speaking thus of acute catarrhal phthisis, I do not refer at all to acute miliary tuberculosis.

This latter disease is a very rare affection. It has altogether a peculiar history and course. It is much more like one of the acute infectious zymotic diseases in its course than it is like a local affection. It has a peculiar temperature curve, a peculiar state of the nervous system and of blood intoxication, while the local signs in the lung are comparatively slight and obscure. It runs its course in from seven to fourteen days, terminating invariably in death. As a rule, it comes from the absorption of some infectious matter, from a previously existing centre of cheesy degeneration, although, in a few cases, it has exploded in an individual who has no such centre, but who has inherited a virulent degree of the tuberculous diathesis. Generally, in such cases, the disease appears early in life.

Acute catarrhal phthisis is, as I have said, the outcome of an acute catarrhal pneumonia, and runs a course whose length is dependent upon the severity of the attack and upon individual peculiarities. This affection is not recognized as constantly as it should be. This is because the physical signs are not well marked, and are not the ordinary physical signs of pneumonia, as we have come to consider it; that is, lobar pneumonia. Usually, when a patient is attacked with catarrhal pneumonia, he will not have very violent fever, marked dullness, bronchial breathing, and the other marked symptoms that we have in croupous pneumonia, and thus many cases are entirely overlooked. The affection may involve a very small area of the lung, or it may involve the whole of one lobe, or portions of both lungs.

Let me illustrate this by a case I saw a short time ago. A patient comes into my office and states that he has a bad cold, and that he had a slight rigor forty-eight hours previously. I find him distinctly feverish, with rapid pulse and res-

piration, and on examination of the chest there is found a left-sided broncho-pneumonia. Râles are heard pretty much all over the left lung. The râles are some sonorous and some sibilant, formed in the larger tubes, and indicating a process of bronchitis of these tubes. With this there are heard, in a number of points over the front and back, coarse sub-crepitant râles. Very careful percussion shows that at several points in the left lung resonance is not perfect as compared with the resonance of the points immediately around them; not that it could be called flat, but simply less resonant than over the unaffected lung.

The patient is ordered home and to bed. The disease passes on through a stage, attended by a moderate degree of fever of rather a remittent type, with a rise in the evening to 102° or 103° and a fall in the morning to about 101°; never entirely disappearing. This is attended with a good deal of perspiration; the skin is relaxed, the cheek of the affected side is flushed, and the patient loses flesh very rapidly; he becomes extremely anæmic; the tongue is foul and coated, but the appetite is pretty well preserved; the secretions are scanty, as in all inflammatory or febrile affections; the urine is scanty and high colored, and the bowels are constipated. The cough is troublesome, and is attended with considerable expectoration, at first of clear mucus, not rusty colored, but soon becoming streaked with yellow lines, and gradually more solid and purulent in character.

The physical signs remain as I have described them, except that the râles gradually become larger and more moist, and are heard over the whole of the left lung, back and front. With this there is scarcely any dullness on percussion over the lung, and it is only by very careful examination that you will find four or five points of limited size, where there is distinct relative impairment of resonance. You would be surprised at the great disproportion between the numerous râles and the amount of dullness and the absence of pure bronchial breathing.

As the case advanced, the lower portion of the lung cleared up, the râles gradually diminished, and the respiratory murmur returned; but at the apex there remained râles, which became larger and larger, until they finally became almost bubbling in character, the respiratory murmur slowly became more blowing in character; diffused, hollow, blowing breathing.

Now what has been the course of the disease in the lung? We have had originally a catarrh affecting the bronchial tubes. This has extended along the left bronchial tube until it has reached and involved the alveolar structure, and thus set on foot a broncho-pneumonia of the left lung. Such changes are very insidious in their course, and the disease may exist for a long time before being discovered.

Catarrhal pneumonia is to be distinguished from bronchitis by its unilateral character, the presence of sub-crepitant râles, the detection of small areas of dullness, by careful percussion, and by the degree of febrile action. The exudation is not of a croupous but of a catarrhal character; the walls of the alveoli have been attacked so that the cells are no longer able to rapidly get rid of the exudation. It takes a long time to accomplish this, so that at the end of six or eight weeks râles may still continue at the apex of the lung. A portion of the exudation undergoes cheesy degeneration, breaks down, and is discharged slowly.

Will it ever be removed, or will it pass into a state of catarrhal phthisis? This will depend upon the violence of the attack and the tendency of the individual. Every one is liable to an attack of catarrhal pneumonia, and in any one, owing to the causes before referred to, it may set on foot catarrhal phthisis. Of course, in a person who has a weak state of constitution, particularly if he has an inherited weakness and tendency to lung disease, or if his health has been broken down by any of the debilitating causes of which I have spoken, an attack of less severity will be able to start a catarrhal phthisis in his lung. We may have this disease running a very rapid course, and terminating in from six weeks to four or five months, with all the evidences of a catarrhal pneumonia, passing into a chronic form, with marked fever, night sweats, and breaking down of the lung tissue, and the patient slowly sinking, and finally dying. These are cases of galloping consumption, or acute catarrhal phthisis. There are one or two symptoms occurring during its course to which I shall allude more particularly toward the end of the hour.

In the more common form the disease is not usually so severe or general from the beginning; but it begins like a common cold, and is, I am sorry to say, often mistaken for an ordinary cold. The patient does not trouble himself much about it, but thinks that it is an ordinary cold, such as he has often had, and that he will be well in a few days. If such a patient was carefully examined, it would be found, instead of there being an ordinary cold, by which we mean a catarrh of the upper air passages, that there was

considerable febrile action, more than usually occurs with a simple coryza, or a simple catarrh of the throat.

On carefully examining the lungs, there would be found, at some parts, physical signs indicating a slight degree of catarrh of the small tubes and air cells. The points where you will usually find these signs are at the apex and the root of the lungs. The physical signs that, as a rule, you will meet with are such as these: in the first place they merely indicate congestion of the lung tissue, and a slight catarrh, feebleness of the respiration, with prolonged expiration, and on very deep breathing, or after coughing, you will have a few sub-crepitant râles; or there may be more marked catarrh; then we will have sonorous and sibilant râles, with more copious sub-crepitant râles; or lastly, the attack may be attended with a large amount of exudation; then there will be a slight impairment of resonance, a little difference on the affected side, as compared with the surrounding healthy lung, the respiratory murmur rather harsh and blowing, the expiration prolonged, and the râles more marked.

Now, these are the physical signs met with in a localized pulmonary catarrh, which is, in reality, a simple circumscribed attack of catarrhal pneumonia. You see that these are very slight signs, and unless the physician is wide awake and the examination very minute, they will very likely be entirely overlooked. If you simply run your ear over the chest, without removing the coat and vest, you will be sure to mistake the nature of the attack.

The febrile signs pass away in from two or three days to a week, and the patient appears to have regained his ordinary health. He has a little expectoration, which diminishes, and the cough passes into a simple, dry, hacking cough. He goes about his business and continues, for an uncertain time, pretty well. Another attack similar to the first occurs, perhaps after two months, or perhaps after a longer period. This attack is more marked, and the nature of the disease more easily determined; but I have had cases where there had been evidence of at least five or six attacks, and where their nature had never been recognized until after a period of nine or ten months, and not until the disease, which had at first involved only a trifling spot, had involved a considerable portion of the lung.

This is the history of three out of four cases of so-called consumption. They commence as ordinary colds; the patient will tell you he has a neglected cold, which has finally settled itself upon the lung. The probabilities are that this was an attack of catarrhal pneumonia, involving a small spot of the lung, and as each attack has occurred, it has involved the affected spot, causing an extension of the inflammation, until finally the exudation has passed into a cheesy state, the tissue of the lung has become involved and broken down, and phthisis has resulted.

I would, therefore, dwell on the extreme importance of recognizing the early stage of this disease, and it is only by a minute physical examination that we are enabled to tell whether a patient who has a feverish cold has a simple catarrh of the upper air passages or a slight catarrhal pneumonia. Any patient who has a catarrhal pneumonia, no matter how small the affected spot may be, is in danger of having it remain and pass into a catarrhal phthisis or develop tuberculosis. It is of the greatest importance to recognize catarrhal pneumonia, because, while it is true that, after the disease has involved a large portion of the lung, with destruction of its tissue, an entire cure is impossible, it is equally true that in the early stage, before destruction has occurred, the process is curable, in the majority of cases. It is only in those cases where the constitutional tendency or the individual peculiarity is very marked, that we find a resistance to our treatment in the beginning of the attack. I think it is no exaggeration to say that the great majority of cases of consumption are curable in the early stages. We will hereafter see how far it is curable in the later stages.

Suppose the patient does not consult us in the early stages, but after some period of time has elapsed, what will be the conditions present? I have a number of patients here who illustrate these conditions. After the acute stage has passed it leaves behind certain changes in the lung, and the patient presents certain general symptoms. Let us first study these general symptoms. They vary greatly, according to the state of the local trouble, but much more according to the individual peculiarity. Sometimes a patient with positive lesions in the lung will seem to be in ordinary health, keeping his flesh very well.

Now here is a lad who has a small circumscribed cavity under the clavicle. He had when he came in a catarrhal phthisis of the left apex, profuse night sweats, quite rapid emaciation, and marked physical signs, but no spitting of blood. The acute stage passed away, but has left behind an induration of this upper right lobe; he has gained in flesh, the night sweats have stopped, and he has the appearance of

being in pretty good health for a person who has been confined so long in a large hospital. Some patients, then, will present almost ordinary health, with scarcely any febrile action, with little cough and expectoration, and they will scarcely believe you when you tell them of the local disease in the lung. More frequently you will find that such patients present a history of recurring febrile attacks.

Now, for instance, this man, Fisher, who has a catarrhal phthisis of the whole upper lobe of the right side, with only small centres of disease scattered throughout the lobe, not giving rise to any marked dullness, but causing impaired expansion of the upper part of the right lung, weakness of respiration, prolonged expiration, and on coughing or deep breathing slight mucous râles, indicating that the lung has passed into a state of degeneration, leaving, I fear, little ulcerated spots, has presented in the highest degree these occasional febrile attacks.

If while he is feeling perfectly well a change of weather occurs, or he makes some unusual exertion, or sometimes without any apparent cause, he will have a little creep, followed by fever. He will feel a little sick and lie down, but in the course of twenty-four hours he again feels better. He has more cough, and examination shows the physical signs to be more marked. I suppose that since he has been under my observation he has had eight or ten of these attacks. Such attacks are highly characteristic of catarrhal phthisis in its chronic variety. The patients become so susceptible to any disturbing cause that they will have such attacks even under the best of care, and with every attack you will observe that there has been a fresh development at some part of the lung, usually around the affected area. These occasional febrile attacks the patient ascribes to fresh colds, and there is a certain amount of truth in this, because there is, with each attack, an extension of the catarrhal process.

During the whole course of the disease there is apt to be some irregular febrile action. This varies much in different persons; for instance, this patient is almost entirely free from fever; this next man has more marked febrile action, with a morning temperature of 98° and an evening temperature of 99.5°; while this one has a continued febrile action, and his morning temperature is never down to normal. As the disease advances and the system becomes more and more broken down the fever assumes a marked hectic type.

I have now a patient under my care, with catarrhal phthisis, in whom the morning temperature is never below 102°, and the evening temperature 104°, 105°, or 107°. I have found her sitting up in bed, feeling pretty comfortable, with a temperature of 107.5°; but, of course, this high fever is only seen in exceptional cases, where the system is strongly predisposed to fever, or where the local process is highly irritating.

With this fever we are very apt to find night sweats, and popularly, these are regarded as certain signs of the existence of consumption. As a rule, however, night sweats are only an evidence that the patient has had hectic fever, and that after the fever there has been a crisis, accompanied by sweating. Generally, they are not very injurious, but sometimes they are excessively profuse, and thus cause exhaustion. Thus, in the lad, the fever was not very high, but the night sweats were very obstinate, and resisted almost every known remedy for that condition. Sometimes, after a patient has recovered from a catarrhal attack, he is very much predisposed to profuse sweating. When this occurs, it is a very significant symptom. I have repeatedly had patients, who were suffering from night sweats in a very marked form, tell me that some years previously, after getting a slight cold, they had troublesome night sweats for three or four weeks, which had been stopped by treatment.

You will occasionally meet with cases in which the hectic fever and night sweats are so pronounced that they mislead you as to the nature of the trouble. You may mistake it for malarial fever. Sometimes the patient will tell you that he was perfectly well until he had an attack of chills and fever. On examination, you will find that he also had a little cough and expectoration. In such cases the patient has had a slight catarrhal pneumonia, with the hectic fever and sweats well marked; but after the attack has passed into the chronic form the chills and fever have become more moderate. Hence, when a patient presents a history of an apparent malarial attack, and if he has a slight cough, you should study the lungs very carefully. Night sweats are then a frequent symptom of phthisis; but, as a general rule, they are not to be regarded so much as causing harm as the hectic fever which causes them.

All these patients present marked anæmia. There is great impairment in the power of the blood-making apparatus. They lose the power of keeping up their circulation under exposure, and are apt to have cold hands and feet, although you will often find that the palm of the hand burns with a hectic flush. You will also usually

recognize the well-known hectic flush upon the cheek, which gives a deceptive appearance of health.

Loss of flesh is a very constant symptom, much more so than you would think if you believed what your patients tell you, for they will often insist upon it that they are keeping their weight. In some of these cases there is a strange blindness on the part of the patient as to his true condition. There is only one way to determine the question, and that is to weigh the patient yourself. I long ago adopted the plan of weighing my phthisis patients at short intervals, in order that I might know the effect of phthisis upon this point; and as a matter of fact, I think you will find that no one symptom is more worthy of study or more important as showing the condition of the patient, than this variation in the weight. If a patient, although his cough and expectoration continue unchanged, is slowly gaining in weight, I think it is a most favorable sign; but if a patient continues to lose weight, while the other symptoms improve, I consider it an unfavorable omen. This loss of flesh is sometimes very rapid, rendered so by the high degree of fever, the copious purulent expectoration, and the intermittent attacks of diarrhœa, of which I shall speak more particularly in a few minutes. Sometimes it is very slow, and the patient will keep his weight for some time.

Loss of strength and shortness of breath is always presented by these patients. They give out on the least exertion, and this exertion causes considerable shortness of breath. The shortness of breath is caused partly by loss of power in the respiratory muscles and heart, and partly by the actual crippling of the lungs; but when the patient is quiet you will be amazed to find how little they suffer from shortness of breath. I do not suppose that one of these five men before you suffers from any conscious shortness of breath. This seems to be due to the fact that, as the lung is involved, there is a corresponding wasting of the solids and of the blood, and a corresponding diminution in the chemistry of the body; there is less blood to be oxidized, and consequently a smaller amount of pulmonary tissue suffices.

Cough is a very constant symptom; few patients are free from it, but I have had patients come to me and say that they have not coughed for several months. The cough of catarrhal phthisis varies according to the stage of the disease. In the early stage, during the acute attack, the cough is troublesome. This subsides and becomes of a hacking character, occurring at short intervals, but frequently leaving the patient free at nights. As the disease advances, and the exudation breaks down, you will find that the cough becomes more severe and harder, and is apt to occur especially at certain times of the day, particularly if a cavity has formed, which fills up, and coughing comes on, and it is emptied. This may occur with the regularity of clockwork. When the cough is hard and spasmodic, particularly when matter is raised from the lower part of the lung, it may excite vomiting, which may prove a troublesome complication.

The matters expectorated are, in the early period of the case, simply catarrhal products and clear mucus; as the disease progresses they become streaked with yellow, and later they acquire a solid, yellow character, floating in a certain amount of bronchial serum or mucus. It is impossible to determine the state of the lung from the character of the sputa, for sputa having all these characters may be produced at any stage, because, while the lesions at one part may have reached the final stage, they may at another point be just beginning. The patient may have a severe phthisis, and raise very little, while another with a small amount of disease may raise a large amount. We must, therefore, conclude that a large amount of the expectorated matters come from the bronchial mucous membrane.

In many cases you will find that the patient complains of local pains about the chest. These apparently depend upon small local attacks of pleurisy, or sometimes upon attacks of muscular rheumatism, to which such patients are exceedingly liable, on account of the relaxation of the whole system.

There are certain special symptoms which may occur during the course of phthisis, to which I will now allude. The first of these, hæmoptysis, or spitting of blood, is a symptom universally dreaded, and always regarded as a certain sign of consumption; but I know of no symptom whose significance is so much misunderstood. There is no difficulty in recognizing when a patient has hæmoptysis; the character of the blood and the way in which it is raised will indicate its origin; but it is very difficult to decide upon the precise spot from which it comes. Undoubtedly, in the larger number of cases, it comes from the bronchial mucous membrane, especially of the smaller tubes. In other cases it comes from the capillaries of the lung. In others from a vessel of considerable size which has been opened by ulceration.

In what condition does it generally take place? We notice it in many cases at the very beginning of the attack. Now, as long as it was the habit to say there was a deposit of tubercle in the lung, and the irritation from this deposit caused the hæmoptysis, hemorrhage was regarded as a sign of tuberculosis of the lung; but as a matter of fact, those cases that have hemorrhage are least apt to have tubercle. In tubercle, as I have described it to you, no blood vessels exist; no anatomist has been able to discover any capillaries in it, and when it forms in the wall of a blood vessel a clot forms, and the vessel is closed. Where you meet with hæmoptysis in a person who has been apparently well, you will find that it usually occurs from an acute attack of catarrhal pneumonia or congestion of the lung.

We thus see that hæmoptysis is most frequently an evidence of acute congestion or acute catarrhal disease, and that it generally occurs at the very beginning of the attack, and that when it appears during the progress of the chronic form it will usually be found that each attack of hæmoptysis marks an acute extension of the disease.

I have a few more remarks to make in regard to hemorrhage, which I shall defer until we meet next week.

Communications.

THE SUMMER DISEASES OF CHILDREN.

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During the intense heat of the summers of the United States few children entirely escape without a more or less aggravated attack of what was formerly familiarly known as "the summer complaint," now so commonly called "cholera infantum." This ailment generally attacks children about the time of their first dentition, or from the sixth month to the eighteenth. It is rarely met with after the age of two years. It generally commences its ravages about the first of July and continues with greater or less severity until the approach of cool weather in October. Much, however, depends upon the suddenness of the accession of the heated term. The author has met with one well-marked, nearly fatal case, this year, early in April, on the occasion of one or two days of great warmth.

While it is extremely prone to attack hand fed children and those who, by reason of poverty, are exposed to impure air, as by over-crowding, ill-ventilation and filthy surroundings, yet it is by no means confined to these classes, but may and frequently does attack the nursing children of those who are placed under the happiest auspices as to fresh, pure air and the best hygienic conditions.

Again, even where it would appear as though the hygienic relations were especially fitted to favor the production of this disease, it constantly occurs that children so exposed entirely escape an attack. The author has so frequently observed this, that he is forced to the conclusion that there are several factors in the causation of this disease other than filth, heat, and improper food. Perhaps one very great aid in the prevention of attacks in these cases is the fact that these children live almost entirely in the open air during the daytime. Bad as may be their surroundings, there is a constant infusion of fresh air, which, though it may not be of the purest, yet aids in diluting greatly the poison emanating from the filth, etc. Children so exposed from very early infancy, and in the healthier seasons, are thus rendered less pregnable to disease, or when attacked are less severely affected.

From these views it will readily be seen what may be done in the way of preventing the occurrence of the disease. Chief among these measures will be the early removal of infants, at the critical period, from the heated atmosphere of a great city to the country, or preferably to the seaside. Nor is this only of value as a means of prophylaxis, but it constantly serves to cut short an attack, and even, in many instances, the author has seen a removal to the seaside followed by a speedy recovery, where the little patient seemed almost beyond hope. Where such removal is impracticable, the next best plan is to take the child on the water daily, as can readily be done by means of the numerous ferry boats plying constantly on the rivers on which our large cities are generally located. Or to keep the child from an early hour in the open air, until the intense heat of midday commences, and again in the afternoon, as the heat begins to decline. For this purpose the numerous parks are of great value, and when these are at too great a distance, recourse must be had to any open space where sufficient shade can be obtained.

When the child is nursing, the diet, during the heated term, should never be mixed, but it should be restricted solely to the breast milk. Where the child is artificially fed, too much attention cannot be given to the utmost cleanliness of the nursing bottle, the avoidance of adulterated or sour milk, the overloading of the stomach,

and the prevention of violent motion of the child soon after feeding. If we add to this, perfect cleanliness of the child, non-exposure to the direct rays of the sun, care as to its general surroundings, and the use daily of the tepid bath, we give our little patient the best chances for immunity from an attack.

Cholera infantum may commence abruptly, or may be preceded by a diarrhœal stage. The latter is by far the most commonly observed. For several days the bowels are loose, the evacuations quite thin and of a yellow or pea-green color, and in other cases nearly natural in color but of a watery appearance. This may continue for several days, and suddenly there occurs an explosion of the disease, heralded by very frequent stools, consisting almost wholly of water, often colorless and without odor, and along with this there ensues great irritability of the stomach, so that it almost instantly rejects everything that is taken. This irritability speedily extends to the lower intestine, so that the evacuations are actually squirted from the anus, often in a frothy state. Where the preceding diarrhœa has existed for a time, emaciation has gradually occurred, but when the attack is sudden, it is remarkable with what rapidity the child assumes the appearance of one that has been sick for a long time. Within a few hours it comes to look like a little "old man," with pinched features, sunken cheeks, hollow eyes, the fingers long and bony; in short, it presents every symptom of an extremely rapid abstraction of the fluid constituents of the body. In no way can we be enabled so readily to appreciate the fact that the fluids are so greatly in excess of the solids in the human body as when we see one of these shriveled little mortals, a living skeleton, eagerly demanding fluids, which are almost instantly rejected. In many instances, the change of a few hours is so great that even those constantly in attendance upon the child fail to recognize a familiar feature.

The progress, unless fortunately checked, is now rapidly downward; the dejections soon become almost clear water, and pass away involuntarily; the child lies motionless, or with an occasional fretful fling from side to side; there is the most intense thirst; fluids are swallowed with eager haste; there is little or no pain; great acceleration of the pulse without force; the eyes remain half closed, the lips parted; coma sets in, and death soon closes the scene.

One great peculiarity of the stools is their entire want of odor, or the presence of a musty smell, which is very offensive, and the presence of minute flocculi, so as often to give them the appearance of rice water; hence the name rice-water discharges. As a general rule, the urine is scanty, and often is wanting.

In the early stages of the attack the temperature usually runs high, perhaps as high as in any disease of childhood, 105°-107°, but reduction of heat rapidly ensues, commencing at the extremities, the abdomen and head being the last parts to yield and become cold.

Death usually occurs from exhaustion, and the child dies without an effort, though in some instances the irritation seems to extend to the brain and spine, and convulsions occur, or the child burrows with its head in the pillow, rolls the head from side to side with a monotonous, distressing motion, apparently unaware of what it is doing, and at intervals utters short, sharp cries. Even at an early stage it is frequently the case that the child shows its irritability by a peculiar cry, which, once heard, is apt to impress the attentive physician as the herald of some dangerous complication.

Epidemics of this disease differ in many ways. In some it seems to assume a very acute form, so that the majority of deaths occur within twenty-four to forty-eight hours. In others it is more chronic though not less fatal, and the case may be prolonged for several days or a week. Where the special symptoms abate, the disease becomes nothing more than a diarrhœa, but attended with great debility.

The differential diagnosis between this and similar diseases of children is made by the peculiarity of the stools—thin, watery, soon becoming colorless and odorless, or musty, irritability of stomach, great thirst, rapid emaciation, etc.

The correct treatment of cholera infantum is of great importance, inasmuch as thus a large number of cases may be saved which appear at first hopeless, or which by careless or inappropriate management would rapidly drift down to death.

The most prominent symptoms imperatively demanding immediate relief are the irritable stomach and the exhausting evacuations. To relieve the one and arrest the other, therefore, will be the primary indication. For the first, the persistent vomiting, the exhibition of small doses of calomel, say one-twelfth to one-sixth of a grain, repeated every hour, will almost invariably suffice. It will be best given placed dry on the tongue and washed down with a sup of milk, or some bland mucilaginous drink. Frequently, this so speedily relieves that the whole scene is changed, and often the diarrhœa is equally

checked. No doubt, this latter symptom is, in many cases, more or less continued by the efforts of the child in vomiting, and that quieted, the bowels experience less perturbation.

In this connection, it must be remembered that *rest in the recumbent position* is of great value, and this should be strongly impressed upon the attendants, who, by their mistaken though kindly meant treatment of the child, materially aid in keeping up a condition which is rapidly carrying it to the grave. When the calomel fails, the use of small doses of dilute sulphuric acid will often serve to put an end to the vomiting:—

℞. Acidi sulphurici dil., gtt. xl
Syr. simplicis, f. ℥ j
Aq. menthæ viridis, f. ℥ ij. M.

Dose.—One teaspoonful every half hour or hour.

To aid our remedies we may employ some form of warm fomentation to the stomach. Or, by producing a positive redness of the surface of the epigastrium, by means of a mustard plaster, great relief is frequently obtained. Other and very useful methods are poultices of hops, spice plasters, and the application of a few leeches to the surface of the epigastrium.

Additional medicaments are chloroform, in drop doses frequently repeated, mixed with mucilage of acacia and a little syrup, followed immediately by the application of a small piece of ice in a cloth, so that it may slowly be dissolved; small doses of camphor dissolved in ether; or powders of the subnitrate or subcarbonate of bismuth.

To arrest the frequency of the discharges, a very useful remedy is the bismuth, in five to ten grain doses, with the compound powder of ipecacuanha:—

℞. Pulv. ipecac. comp., gr. iv–vj.
Bismuthi subnitrat., ℥j. M.
Ft. in chartulæ, No. xij.

Dose—One every two to four hours, according to circumstances.

Where the exhaustion is great the bismuth may with much advantage be combined with the aromatic spirits of ammonia, which is a most excellent stimulant in all cases of exhaustion in children; or it may be given separately while the bismuth is continued, with or without the ipecac. powder. In employing any narcotic, paticularly opium, great watchfulness must be observed as to its results. It is always contra-indicated where the disease is complicated with brain symptoms. Give it in small doses, with care, and withdraw it as soon as the evacuations are checked, or if necessary, continue it in greatly reduced doses. For children, the camphorated tincture of opium is preferable to the tincture.

The diet must be mainly milk, with lime water, beef tea, mucilaginous fluids. Brandy or whisky should be added from the outset, and continued in small but frequently repeated doses, until recovery has proceeded so far as to render stimulation unnecessary. To relieve the intense thirst ice in small pieces may be rubbed over the gums and allowed to dissolve in the mouth, or a teaspoonful of cold water, at short intervals, may be given. The child should never be allowed to suffer for want of it.

Frequent sponging with alcohol and water, or tepid water alone, will prove advantageous. This is better than the use of the bath, as the necessary movement of the patient is liable to add greatly to the exhaustion, or to induce it. In addition to these measures, there must be the most scrupulous attention to ventilation and cleanliness. Never allow the child to remain in an overcrowded room; better that it should sleep in the open air night and day.

Perhaps a most fruitful cause of bowel affections in children, and also in adults, is exposure to a draught at night, or rather toward morning, when the temperature is usually at its lowest. In their restless tossing, by reason of the heat, they become completely uncovered, and so lie exposed; the legs and abdomen are chilled, producing congestion of the bowels, and a diarrhœal attack ensues.

Regarding cholera infantum as usually, if not invariably, the result of congested bowels, good effects have been observed after the employment of a positive counter-irritant to the surface of the abdomen, and also to the whole length of the spine. The best rubefacient is a liniment composed of ammonia, turpentine and castor oil:—

℞. Liq. ammoniæ, f. ℥ ij
Ol. terebinthinæ, f. ℥ ij
Ol. ricini, f. ℥ iv. M.
Ft. linimentum.

Rub the abdominal surface and the spine briskly with this, so as to redden the skin, and repeat about every two hours. In many instances immediate good results follow, and the patient rapidly convalesces.

As the case progresses tonics may be given, to aid the recovery of strength.

Quinine is especially the children's tonic, is readily tolerated, and rarely fails to prove of value. As a tonic for weak bowels, the solution of nitrate of iron cannot be excelled. It is best combined with a vegetable bitter.

In those cases where the progress is less favorable, where the brain becomes involved, it will be necessary to employ cool or cold applications to the scalp, and this may be best done by the use of the ice cap, ice in a rubber bag or a bladder, or pieces of ice in a folded towel. At the same time, hot pediluvia, sinapisms or rubefacients to the lower extremities, will aid in inviting the blood from the brain. It must not, however, be forgotten, that cerebral symptoms may be simulated by exhaustion, for which the proper treatment will be more positive stimulation and larger doses of quinine and iron in some form. Blisters in very young children are always a remedy of doubtful value. Often they do not seem to produce sufficient advantage to compensate for the annoyance they give the little sufferer. A blister should never be placed upon the nape of the neck, as we thus inflict upon the child a terrible punishment, compelling it to lie almost wholly upon its face, in order to escape the irritation caused by the rubbing and pressure of the blistered surface upon the heated pillow. When deemed absolutely necessary, they may be applied behind the ears, and most easily by means of the blistering collodion.

Where there exists positive evidence of cerebral congestion, a better plan will be the application of two or three leeches to the temples, being careful not to allow the bleeding to continue too long, and thus complicate the case further. After this the cold applications may be continued as indications present.

For great restlessness, and to insure a good sleep, bromide of potassium or sodium, and chloral may be given without hesitation, and with the expectation of good results.

Finally, never despair of a happy issue, as we constantly see cases, apparently desperate, recover, as if to confound our evil prognostications. Persevere judiciously, but earnestly, until death itself prevents further efforts.

With convalescence, it must constantly be borne in mind that relapse is extremely liable to occur. Therefore, eternal vigilance will be necessary in the diet, ventilation, clothing and exposure.

To be continued.

Disguising the Taste of Epsom Salts.

According to the *Gaz. des Hôp*, June 12, 1880, the *purgatif Yvon* consists of sulphate of magnesia twenty grams, water forty grams, and essence of mint two or three drops. The essence of mint completely masks the disagreeable taste of the sulphate, providing that the quantity of the vehicle is inconsiderable.

WEAK EYES.

Read before the Medical Society of Cecil County, Md.,

BY HENRY S. SCHELL, M.D.,

Surgeon to Wills Hospital.

The term *weak eyes* is generally used to denote such eyes as cannot be used without pain or discomfort, but in which there is no obvious sign of disease or of failure of vision.

The subject of weak or irritable eyes is one of considerable latitude, and I propose to divide all cases coming under this head into two classes.

1st. Those arising from causes immediately connected with the eye itself or with its appendages, and 2d. Those arising from sympathy with other parts of the body. The former is exclusively ocular, the latter reflex or constitutional in its origin. The first comprises a narrow domain, of difficult surface, which can only be cultivated to advantage by the aid of instruments of precision, and within which the tendency is to abandon more and more every day to the tillage of the specialist. The last include a far wider range, and although the great landmarks are often first pointed out by the ophthalmologist, the ground really belongs entirely to the general practitioner. As there is, however, no hard and fast line separating the functions of these two laborers in the medical estate, it is possible that in considering the cultivation of "fresh fields and pastures new" they may often be of mutual assistance to one another.

The weak or irritable eyes of the first of these two classes may be again profitably divided into three main varieties, in relation to their causation, viz: into those arising, 1st, from anomalies of refraction; 2d, from failure of the mechanism of accommodation, and 3d, from inflammatory conditions. Those of the second class are divisible into two varieties: the first of which is manifested by a partial or complete paralysis of the nerves of accommodation, and the second, by paresis of the vaso-motor nerves of the interior of the eye.

I propose to pass these several varieties in review, and to invite attention to the means by which they may be distinguished from one another, in a general way, even without the aid of the ophthalmoscope. In the first place, then, concerning *anomalies of refraction*. These are, with perhaps the exception of myopia, mostly congenital. They may make their presence evident in early childhood, with the first attempt to learn letters or to use the eyes upon some close work, or they may lie dormant and only declare their presence at the age of fifty or even sixty years,

when increasing hardness of the crystalline lens renders futile the efforts of the ciliary muscle to neutralize an abnormal curvature in the cornea. In asthenopia of this sort the patient gives the following history of his troubles: He says that in commencing to read he at first sees the letters distinctly, but they sooner or later become blurred and run together. If he closes his eyes for a few minutes and tries again, the same experience is repeated. If he then strains hard to see, he perhaps succeeds, but it is at the expense of feelings of pressure and fullness in the eyes, and of tension in the forehead. A continuance of the effort brings on pain in and around the eyes, headache, giddiness, and even nausea and vomiting, together with a sensation of dazzling, some lachrymation and injection of the conjunctiva. This state of affairs may have existed for some time, and the symptoms may have gone on from bad to worse, before the patient applies for relief, and we may then find him with contracted pupil, chronic hyperæmia of the tarsal conjunctiva and hypersecretion of mucus, simulating a catarrh. At this stage of the affection the patient is much troubled with intolerance of light, and especially the glare of gas or other artificial means of illumination. Styes are apt to make their appearance along the tarsal borders, and meibomian cysts to form in the substance of the lids. The patient, perhaps a clerk, an expert penman, dependent upon the use of his eyes for a livelihood, now begins to think seriously of abandoning his occupation and of beginning life anew, by searching for another, wherein accurate eyesight will be of less importance to him.

All the painful symptoms in these cases are at once alleviated by the use of atropia, which puts near work out of the question, sets the eye at rest and prepares it for an accurate examination of the refraction. It is not, of course, necessary, in such cases, to subject every eye to the temporary indistinctness of vision which atropia produces, but wherever there are clear indications of the existence of astigmatism, it will usually be, in the end, the best course to pursue. The only permanent relief in all these anomalies of refraction is to be gained by the careful adaptation of proper glasses, and, if necessary, by the gradually increasing exercise of the eyes before using them for continuous work.

I have said that anomalies of refraction sometimes first disclose their presence as late as at the sixtieth year of age, and, indeed, it is not very infrequent to find persons beyond that age applying for relief from asthenopic symptoms. These individuals have generally been wearing glasses for years, changing frequently from one pair to a stronger, until at last, from orbital pain and irritation, they find themselves unable longer to read for any length of time. A still stronger pair of spectacles, from the optician, enables them to see, by enlarging the retinal image; but a strong glass means a short focus, requiring close approximation of the object under examination, and the internal recti muscles soon falter under the fatigue of forced convergence, and the sight becomes blurred again. Such cases will usually be found to require a combination of a cylindrical lens with a spherical one of much less power than that of the one they have been accustomed to wear.

The second variety of weak eyes from intra-ocular causes, blends at its edges insensibly with the first. For, though the failure of accommodation, through senile hardening of the lens, first shows itself, in the normal or emmetropic eye, between forty and fifty years of age, yet the same indurating process really commences very early in life, and goes on, increasing gradually throughout. So that if there is any complication of hypermetropia or astigmatism the effects may appear much earlier. The attempt to evade the use of glasses in these cases generally produces precisely the same set of symptoms as those previously described.

In most inflammatory conditions of the eye, which constitute the third variety of this class, there is usually a frank exposure of their presence, by reason of the injection of the ocular conjunctiva which accompanies them. But, occasionally, this symptom is absent, and the most obvious condition appears to be that of weak sight. In these cases, in addition to the ordinary painful or uneasy sensations which arise when an attempt is made to use the eyes, there is always considerable intolerance of light; this being, perhaps, the most prominent symptom, and it will be found that the disagreeable feelings and asthenopia do not disappear after prolonged rest. Indeed, the eyes often feel worse on first waking in the morning than they did the night before. Inflammation often lurks undetected in the conjunctiva of the upper lid, but is liable to betray its presence there by an increase of the mucous secretion, and if the patient is closely questioned, he will remember that his eyelids have a tendency to stick together in the mornings.

It is well, as a matter of routine, to evert the upper lid, and examine its inner surface, in all cases where weak or irritable vision is the subject of complaint. Of course, in those cases the treatment will depend upon the tissue implicated,

the amount of inflammation, and other circumstances which it is unnecessary to discuss at this time.

But it is the fashion of the day to lay too much stress upon local conditions as causes of weak eyes, and especially to attribute too great an influence to trifling anomalies of refraction. The minutest defects of this kind, divergences from mathematical accuracy of focusing, which are yet perfectly within the limits of emmetropic variation, have been supposed to account for the most distressing asthenopic symptoms. In consequence of this an epidemic of spectacles has ravaged the community. No sooner is one person affected than the disease spreads through the whole family, and pretty girls in their teens are transformed into strong-minded-looking women, behind an armor of glittering glasses. It is no uncommon thing to find a patient going from one oculist to another, getting a new prescription for spectacles from each, and always without relief. Much of this condition of affairs is no doubt due to a mental myopia on the part of the practitioner, and results either from an exclusive devotion to a specialty at too early a stage of the professional career, or from the attention being narrowly riveted to the organ under discussion, to the neglect of the rest of the system. The practice of a specialty should be an attribute of ripe experience, not of the beginning of real study. The eye is not a separate entity, which can be detached from the body and live, but an inseparable part of the whole individual, and if we have a sick eye to treat we want to know, not only what is the matter with it, but everything that bears adversely upon the health of the person to whom it belongs.

This brings us to the consideration of the second division of our subject, viz.: those cases in which the weakness of the eyes arises from sympathy with other parts of the body. The cases are, as I said before, of two varieties, both affecting the nervous supply to the interior of the eye. In the first variety, those filaments of the third nerve which control the mechanism of accommodation are more or less completely paralyzed. The eye readily becomes fatigued when used; in reading, the letters presently run together and are illegible; all objects look smaller than natural, and a continuance of the effort to use the eyes brings on most of the series of asthenopic symptoms already related. When the eye is closely examined it will be found that the pupil is somewhat dilated; that it does not contract under efforts at near vision, and in some cases, not even under the influence of light. In addition, the iris is more or less tremulous after or during quick movements of the eye. This condition occasionally arises from caries of the teeth, in children, and especially in girls of from 10 to 20 years of age, no doubt owing to the greater excitability of the nervous system in the sex. The anatomical connection may be traced through the ganglionic filament of the first branch of the fifth nerve to the lenticular ganglion which is in communication with the third nerve by its short root. Several teeth are usually carious in these cases, and there is always a history of a good deal of toothache. The application of the extracting forceps, or better still, whenever practicable, the careful attention of a dentist, usually insures a cure, although at times the acquired inertness of the muscular fibres in the ciliary body and iris needs to be overcome by galvanism before the cure is complete.

Acute swelling of the cervical glands sometimes produces temporarily the same condition, probably through pressure on the auriculo-temporal branches of the fifth nerve, and thence, by reflex action, through the route designated above.

Disease of the ear, too, not infrequently produces the same effect. It mostly arises in those long-standing cases of inflammation of the tympanum where there is loss of the membrana tympani, with constant muco-purulent discharge, and, like a wounded and flying picket guard, gives reliable information that the outposts of the nervous system have been attacked. I have just such a case under treatment at the present writing. The patient, a young man of twenty-one, came to me a couple of months ago with the complaint that for the past year he had been growing blind in the right eye. Upon examination I found that his acuity of vision in that eye equaled $\frac{20}{xx}$. In the left it was $\frac{20}{xv}$. The right pupil was considerably dilated, and did not contract under attempts at near vision or the influence of light. Accommodation $\frac{1}{7}$. Left $\frac{1}{5}$. The ophthalmoscope showed the refraction to be emmetropic. Further investigation disclosed a purulent inflammation of the middle ear, which had lasted since he was three years of age. Under proper local treatment directed to the ear the discharge has almost entirely ceased, and the remains of the membrana tympani and the walls of the tympanum are returning to their normal condition. *Pari passu*, with these changes the condition of the eye became ameliorated, until at present the pupil is precisely like its fellow. The accommodation has risen to $\frac{1}{2}$; V. $= \frac{20}{xv}$; and he is no longer conscious of any defect in the organ.

In addition to these local causes, the same condition not unfrequently arises in consequence of such general affections as diphtheria, lead poisoning, uræmia, and alcoholism. In these cases, however, the local break down is only part of the general wreck of the system, and the question of local repair is subordinate to the problem of getting the entire vessel safely floated into smooth water and thoroughly renovated and made seaworthy again.

In the second variety of this class there is a vaso-motor paresis, affecting especially the retinal vessels, and perhaps those of the other inner coats of the eye. The symptoms are again those of asthenopia, as previously detailed, with the addition of some peculiar features, however. The aching sensations are apt be more constant and causeless, and less relieved by rest, than in anomalies of refraction. Such cases cannot look fixedly for any length of time at any object, whether near or remote, without exciting severe pain in or about the eye. The patient also complains often of a sensation of dazzling, and of objects moving, especially the floor or ceiling, when the eye is turned quickly toward them.

The turgid condition of the retinal vessels which exists in these cases can, of course, be ascertained by the employment of the ophthalmoscope only; but the unaided eye may generally discern one or two enlarged veins coursing over the white sclerotic, reminding one of a similar appearance in glaucoma; and notice also the readiness with which the ocular conjunctiva becomes flushed upon the slightest exertion of the organ of vision. The vaso-motor paresis seems to be reflex and mostly dependent upon disorder of the genital organs. The third root of the lenticular ganglion is a slender filament derived from the cavernous plexus of the sympathetic, and one of the branches of the ganglion is a small filament which penetrates the optic nerve, along with the arteria centralis retinæ, to supply the walls of the retinal vessels. Other branches follow the ciliary arteries. The path, therefore, from the pelvic plexus of the sympathetic is an almost straight road, and disturbances in the circulation of the pelvic organs produce a wave of vessel dilatation, which travels over this path, and produces a relaxed and turgid condition in the correlated area of the retinal and other ocular vessels, for it is well to remember that the veins also of the retina have a muscular coat. This distention of the retinal vessels can be seen with the ophthalmoscope, but the condition of those of the choroid is concealed by the pigment cells, and must be taken for granted. Now, whenever this condition of vaso-motor paresis obtains in a sensitive organ, then also we have pain, from the stretching of already tense tissues. An analogous condition may be seen in the earache which occurs in young children, in connection with difficulties of dentition. Here the irritation travels from the inflamed gum, by way of the dental branches of the fifth nerve, through the otic ganglion, to the sympathetic filaments upon the tympanic branch of the internal carotid artery; producing that congestion of the membrana tympani which will always be found if the ears of any child with earache are examined under such circumstances.

Much of the pain which often accompanies asthenopia, from anomalies of refraction, no doubt arises from the same condition. For in these cases the pupil is contracted and the retinal vessels dilated, showing paresis of all the branches of the lenticular ganglion. But when the disturbance is reflex in character, and arises from morbid conditions of other organs, the paresis is, so far as I have seen, confined to the vaso-motor nerves only.

The irritation which particularly affects the eye in this manner is that which is transmitted from the uterus in women and from the prostatic gland in men. Three-fourths of the cases, however, occur in young unmarried, or if married, in childless women. There is often an element of apparent unreality mixed with the symptoms, which makes the case appear to border upon hysteria. In one instance, I remember, the patient, an unmarried woman of twenty-three, always averred that she could not lift her hand above her head without bringing on severe pain in the eyes. Here, in addition to a uterine catarrh, the general health was below par. A girl of nineteen came to me several times with the complaint that she was growing every day more and more near-sighted. Careful tests with trial glasses, however, always showed that she was emmetropic and had the normal acuity of vision. She had uterine catarrh, menorrhagia, a consequent lack of nervous tone, and all the train of ocular symptoms heretofore described. In many of these cases, however, the general health of the patient appears to be as good as the average. In some cases which I have met with among men, the prostate, or at least those parts about the neck of the bladder, appeared to have become irritated, in consequence of indulgence in excessive venery. The health of these men was usually, otherwise, fairly good, but they were unable to use their eyes in ordinary avocations, in consequence of their irritability. Accurate correction

of refraction errors, which sometimes co-exist, affords no relief, and cure is only obtained by treatment directed to the condition of the prostate. In treatment I have relied upon cold sitz baths, cold clysters, opium, or other sedative or narcotic suppositories, perineal leeching, in exceptional cases, and sometimes the use of a succession of small perineal blisters. Some cases occurred in men who were accustomed to masturbation. Here the entire urethra was excessively sensitive. The introduction of a metal bougie—which may be passed with little or no discomfort in a healthy urethra—gave rise to apparently the greatest suffering. The pain is evidently most acute when the sound reaches the prostatic region. The introduction of such metallic sounds and their retention for five or ten minutes, I regard as a very important remedial measure. The same condition of the eyes arises sometimes in boys below the age of puberty, who are affected with phymosis and retention of irritating smegma. Circumcision is the remedy in such cases.

Little girls, too, are sometimes affected with weak and irritable eyes, which can be traced only to a state of chronic irritation of the vulva, clitoris and vagina. Sedative and astringent washes are here indicated, with perhaps cauterization of the clitoris with argentic nitrate.

As constitutional measures bearing upon the local condition, especially in men, I have found much satisfaction from the use of potassic bromide in large doses, the fluid extract of ergot, and in women, the oxide of silver.

In relation to the diagnosis of the different varieties of weak eyes which have been under consideration, I would say briefly, that when the irritability is dependent upon anomalies of refraction or presbyopia the annoyance subsides when the visual organ is placed in a state of repose.

When dependent upon inflammatory conditions of the eye or its appendages, intolerance of light is a marked symptom, and rest does not entirely relieve.

In reflex paralysis of the accommodation the partial dilatation of the pupil and its refusal to contract during near vision or under the influence of light is pathognomonic.

And in vaso-motor paresis, sympathetic with disturbance of the genital organs, the pain is more or less constant, irrespective of work, and the appearance of one or two enlarged veins meandering about in the ocular conjunctiva gives a clue to the real condition.

To amblyopia, or dullness of sight, it is only necessary to allude in order to distinguish it from the subject under discussion. In amblyopia, pure and simple, there is no pain; only failure of acuity of vision. The optic nerve itself is affected, and its action may have been impaired from reflex influences or from local causes. But a continuance of this subject would be out of place at the present time. In order to make this paper as short as possible I have thought it best to give only general conclusions and results, thus avoiding a tedious recital of cases from my note books. Such cases would have presented a strong family likeness to one another, and often have differed only in unimportant details of names, ages, and in such features as I have already indicated.

Hospital Reports.

HARTFORD (Conn.) HOSPITAL.

REPORTED BY JAS. P. HOLT, M. D.

Prevailing Diseases and their Treatment, with Report of Cases.

The most common diseases that occur in the hospital are phthisis, intermittent fever, and alcoholism. They do not present any local peculiarities.

The treatment for intermittent fever consists in the administration of cinchonidia sulph., in doses of from ten to fifteen grains, before the chill, and the continuation of five grains three times a day. This method usually controls the disease at once; if not, the ten or fifteen grain doses are repeated before the time of the next chill, about one hour. During the chill stimulants are given moderately, and hot bottles applied. Constipation is present in a majority of cases, and the pil. cathartic co. is given. This treatment generally suffices in nearly every case; occasionally a case continues in spite of treatment. We have found that the hot air bath, given for an hour just previous to the time for the chill, controls the case where other treatment has failed. Other cases have been treated with three-drop doses of Fowler's solution successfully, where cinchonidia sulph. has failed. The ordinary house diet is given.

The treatment for alcoholism consisted in the administration of beef tea, with capsicum, milk, eggs, hydrate chloral, potassii bromide, in doses of fifteen grains of the former and twenty grains of the latter once in two or three hours, as required. Under this treatment the cases progress very favorably.

The treatment of phthisis consists of the administration of cod-liver oil, whisky, anodyne cough mixture, with some form of opium at night, if required; special diet, consisting of anything which suits the patient's fancy, is allowed.

Among some of the house mixtures are —

BUCKLEY PILL.

℞ Sodæ bicarb.,
Rhei rad. pulv., āā gr. ij
Ipecac. pulv., gr. ½. M.
Ft. pil. No. j.
Sig.—One t. i. d.

℞. Ext. conii, gr. iss
Pulv. ipecac., gr. ½
Morphiæ sulph., gr. 1/12. M.
Ft. pil. No. j.
One at night.

PILL SALUTUS.

℞. Pulv. aloes, gr. x
Ext. hyoscyami, gr. x
Ext. nucis vom., gr. ijss
Ol. anisi, gtt. v. M.
Ft. pil. No. x.
SIG.—One at night.

COUGH MIXTURE, NO. 1.

℞. Ammon. carb., gr. viij
Tr. scillæ, ℥ ij
Syr. tolutan.,
Tr. opii camph., āā ℥ iv
Decoc. senegæ, ℥ iij. M.
SIG.—Teaspoonful.

COUGH MIXTURE, NO. 2.

℞ Syr. pruni virg., ℥ j
Sol. morphiæ mag., ℥ j
Acid hydrocy. dil., gtt. viij
Aquæ, ℥ iij. M.
SIG.—Teaspoonful.

The beds used in the hospital are manufactured by the Hartford Woven Wire Mattress Company, and have been in use in the institution nine years, and give perfect satisfaction. In a sanitary point of view they must be used without a mattress of any kind; two double blankets, folded and placed over the woven wire, make a perfect hospital bed; each patient, on entering, is given a clean bed.

The water bed of Neal Arnott is in constant use in our wards. It consists of a water-tight galvanized iron tank, six feet long, three feet wide, and one foot deep, placed within the railings of a bedstead frame; over this is placed a rubber sheet of the widest dimensions, or large enough to make a lining for the tank when empty. The edges of this rubber sheet are fastened, in a water-tight manner, to a strip of wood which surrounds the upper border of the tank. The tank is then filled with water, to a certain depth, according to the weight of the patient; two double blankets placed on the rubber sheet, with usual bed clothing, and the bed is ready for the patient. Patients helpless, or with bad bedsores, etc., are rendered perfectly comfortable on this bed. The entire cost of the bed is about forty dollars.

CASE 1.—October 31st. H. E.; residence Hartford; Swede; domestic; age 17; single. Diagnosis, pregnancy. Patient says she has had good health while carrying her child, which is her first. Patient is able to be about the ward; limbs swollen a trifle; urine normal, on examination by the usual method.

November 24th. Patient was delivered of a male child. Position and presentation natural. The child did not breathe when born, and the color was very dark. Artificial respiration was employed, hot and cold water, and finally the mouth was applied to the child's mouth and air blown in. The child never breathed well, but survived thirty hours. The labor was rather protracted, and quite a severe one. The pains came on about ten o'clock in the evening. The child was born about twelve o'clock the following day, the first stage having lasted about nine hours, the second about five. The patient suffered considerably during the labor, and was quite exhausted at its termination. The circumstances of the case were peculiar, and seemed to have produced their effect on the patient. She was unable to get refreshing sleep, but was awake at all hours of the night. It was noticed that she was very talkative, and wanted to tell over her trouble to all around her. This tendency to talk became more and more marked, and finally became constant. Aside from the mental anxiety caused by her unfortunate condition, no cause could be assigned for her aberration of mind. The urine was examined at different times, chemically and with the glass, and nothing abnormal was found. There was no complaint of abdominal tenderness, except what is usual for the first few days. Her delirium was very curious; she recognized all around her, even those whom she had not seen for some time. She remembered events as they transpired each day, and also recalled those which happened before her sickness. She noticed all the bells about the house, and their varied calls, for doctor, etc. She answered questions intelligently, and addressed those by name who entered her room. Still, when left to herself, she would talk constantly, the most absurd nonsense, and seemed to have no idea that she was acting foolishly. After a week or ten days her tongue became very dry and red, and sordes collected on her teeth. Her bowels required cathartics and enemata to move them, and except two occasions, just before her death, did not move unless aided in this way. The delirium was always strong and active in character. She would get out of bed if not constantly watched. At times she became violent, tearing her bedclothes, etc., and when, on December 26th, she was allowed to dress and move about her room, she destroyed the furniture and her clothing. She grew worse constantly, and required restraint.

The treatment was varied. Stimulants were used freely at first; afterward full doses of cinchonidia sulph., potass. bromide and chloral hydrate were tried freely, then full doses of morphia sulph. Each had about the same effect and were attended with equally poor results.

January 2d.—Patient was very noisy and restless. About two A.M. the night nurse noticed that she was quiet, and suspecting something wrong went into her room. Patient was lying on her back, breathing puffy, and appearance described as similar to one coming out of an epileptic fit. Hypodermic injection of brandy was given freely and the patient rallied and was very comfortable during the day, and rational; at night a similar attack occurred and she never recovered, dying on the morning of the 3d.

Post-mortem.—The cranium was opened and the superficial veins were found engorged with blood. The brain substance was natural; brain large; heart and lungs normal; both kidneys were congested, the right one enlarged; in the pelvis was found what resembled pus in appearance. The omentum, intestines, bladder, uterus,

rectum, and, in fact, all the organs in the lower part of the abdominal cavity, were firmly glued together by old organized lymph, the bands in some places being quite large and firm. The cavity and substance of the uterus were normal.

Case 2.—Rochte S.; residence, Hartford; nativity, Italy; age, four years. Diagnosis, vesical calculi. This little patient was admitted to the hospital for symptoms indicating vesical calculi. The parents had noticed trouble with the passage of his urine for a considerable time; they first noticed it about a year ago. At the time of admission he was in very good condition constitutionally, but with a great amount of irritation about the bladder. Pulling the end of the penis was observed, and calculus suspected. The next day after admission the patient was etherized, and upon the passage of a sound unmistakable evidences of stone presented themselves, and it was decided to operate by lithotomy. Accordingly, on the 15th the Staff were notified, and the patient was etherized, the staff introduced and held, and the operation commenced by Dr. Wainwright, all present having confirmed the diagnosis. The median operation was chosen by Dr. W., as best fitted for this case; a small opening was made through the tissues to the urethra, and an opening was then made in the latter. On introducing the finger the stone was plainly felt, and the forceps were introduced. Some little difficulty was experienced, from the size of the stone, but it was soon extracted, and found to exceed the size which the exploration had led them to believe. Upon again introducing the finger a second stone was discovered, and upon removal was found to be larger than the first. The bladder was then washed out, and the patient given one-fortieth of a grain of morphia sulph., hypodermically. He was quiet, and had a very quiet night, having some looseness of the bowels. Five drops of laudanum was ordered; afterward he had one-fortieth of a grain of morphia, every four hours. On the fourth day after the operation he passed a little urine by the urethra, but this soon stopped, and the urine passed through the wound, and continued so until about the twelfth day; then it was noticed to pass through the natural passage, that is, the urethra. From this day the wound rapidly healed, and in about fourteen days from the date of the operation the cut was entirely healed. The morphia was only given about a week. There was very little inflammation, and the patient has been much more comfortable since the operation. The stones were not subjected to a chemical examination, but from the external appearance of one it was supposed to be phosphate, the other, probably, mixed. Up to the sixteenth day the patient was kept in bed. The larger stone weighed 172 grains, the other 110 grains. Patient was discharged, cured, December 6th, 1879.

Antiseptic surgery has been practiced in the hospital with marked success. All the details dictated by Lister have been carried out in its use.

The following case may be of some interest: John D.; a native of Sweden; age, forty-one; occupation, quarryman. About a week before his entrance into the hospital the patient received a compound fracture of the internal malleolus, and a simple fracture of the external, caused by a fall. The leg had been put up by a "Dr. Sweet," a "natural bone setter," three stitches being taken in the wound. On admission the wound was in a sloughy condition, but it was thought possible to save the leg; but, after using all the means suggested by a consultation it was found necessary to amputate, the sloughy condition having extended so far up the limb that the only choice was between death from septicæmia or amputation. In order to get above the septic matter the surgeon was obliged to amputate at the middle third of the thigh. The operation was done antiseptically. The chances seemed greatly against the patient, but he rallied well from the operation. The stump was dressed afterward, antiseptically, and no bad symptoms presented themselves. The patient continued to improve, and was discharged November 26th, five weeks from the date of the operation, the wound having entirely healed. The rapid recovery seems fairly attributable to the antiseptic surgery. This is only one of many cases which seem to uphold Lister's method.

Editorial Department.

Periscope.

Chloride of Calcium in the Treatment of Phthisis.

James Sawyer, M.D., M.R.C.P., says, in a communication to the *British Medical Journal*, June 5, 1880—

Have we a remedy for phthisis? We now know that the term chronic pulmonary phthisis includes a variety of pathological conditions and a variety of textural lesions in the lungs which have long been recognized as distinct, which recent research has done much to unravel, and about which we may still expect to learn more. We know the differing clinical and pathological courses of tubercular phthisis, unresolved lobar pneumonia, chronic catarrhal lobular pneumonia, and pulmonary scirrhosis. All these are included in the generic name phthisis. When I say have we a remedy for phthisis? I mean have we a remedy for this allied group of conditions, due to varying pathological changes, but marked in common by progressive wasting of the body, by progressing asthenia, by progressing diminution of respiratory capacity, and by fever of a hectic type. Every case of phthisis requires special study, and can be treated by no rule-of-thumb practice because it is phthisis. In one

case anæmia is prominent and calls for iron, perhaps for arsenic; in another, continued but small hæmoptysis calls for ergot or hamamelis; in another, a racking and frequent cough calls for opium, morphia, or codeia; in another, dyspepsia calls for alkalies, or acids, or bitters, or pepsine; in another, nervous unrest calls for bromides; in another, laryngeal troubles call for special local medication; in another, we have to aim at controlling excessive sweating or checking an exhausting diarrhœa. Apart from these and other particulars, I suppose we are all agreed that cod-liver oil, given alone, or variously combined with other agents which tend to promote its assimilation, as with ether, as suggested by Dr. Foster, stands at the head of remedies calculated to promote the general nutrition of the phthisical. Have we any other general remedy? For a long time I trusted to syrup of the iodide of iron. This I gave up for a mixture of hypophosphites and iron—five grains of hypophosphite of lime, ten grains of hypophosphite of soda, and fifteen minims of syrup of the phosphate of iron, for a dose. This is a good combination, and I still use it. But chloride of calcium is my favorite drug. I have used it for some years in hospital and private practice, and I believe with great advantage. Perhaps you will say, Do you give it alone? I do not. I give it with cod liver oil, or with cod-liver oil emulsion, or with morphia, or with ergot; but my general impression is, *quantum valeat*, that I get better results with chloride of calcium with these combinations than I do with anything else in the same combinations. My attention was called to the value of chloride of calcium in phthisis by a paper in one of our medical journals, wherein it was stated that the drug was much used by the late Dr. Warburton Begbie. Scarcely mentioned, if noticed at all, in books on drugs, chloride of calcium has an old repute for the cure of strumous glandular swellings. In phthisis I give ten grains, dissolved in a drachm of water and mixed with a drachm of glycerine, in a wineglassful of milk, twice daily, immediately after meals. I think it tends to check night-sweats, to cause increase of weight, and to dry up pulmonary lesions. Of course I do not maintain it does these things in all cases. What I have stated are general conclusions, open, I am aware, to objection, on the ground of their insufficient logical basis, but conclusions which have been and are for me grounds of therapeutic conduct. In prescribing chloride of calcium, we must be careful to write the name of the drug distinctly and in full, in order to avoid an error from which one of my patients suffered, namely, the substitution of "chloride of lime."

Metallo-therapy.

Dr. L. H. Petit gives, in the *Bulletin General de Thérapeutique*, May 15th, 1880, a detailed account of seven cases, chiefly of hysterical anæsthesia and hemianæsthesia, treated by the internal and external employment of metals. He also mentions a case of paraplegia in a young and nervous woman, evidently of hysterical origin, in which the metallic treatment totally failed, but in which, also, the author considers it was not properly carried out. Gold was first applied without effect, and copper was then substituted for it, with the unexpected result of causing such intense sciatic pain that it was necessarily abandoned. In regard to this case, Dr. Petit remarks that, although the patient was insensible to gold, she was not necessarily so to silver, platinum, or zinc, which, however, were never tried; that this metal should have been applied in the form of "bracelets' instead of large plates; and, finally, that magnets and continuous currents, which have often succeeded when other means have failed, should have been resorted to. His sixth case is a good example of the poly-metalism of certain individuals. The patient was aged seventeen, and suffered from double hysterical amblyopia, dyschromatopsy, insufficiency of the internal recti, analgesia, and anæsthesia of the whole right side of the body, and, later on, of the left. Treatment by chloride of gold internally, and discs of metallic gold externally, for three months, resulted in the recovery of the color sense, while, on the contrary, the visual acuity, without any ophthalmoscopic lesion, continued to decrease. Silver was now employed, together with the gold, and within fifteen days from the application of the former metal on the forehead sensibility returned to the right side, and all the eye and ear symptoms disappeared. Later on, all symptoms whatever of hysteria ceased, and recovery was eventually complete and permanent. Dr. Petit also cites a case of writer's cramp treated by gold internally and externally, magnets and electricity having previously failed. Four to five drops of a solution of 1 in 20 of chloride of gold were administered, and discs of the same metal were worn night and day for a month. At the end of this period the patient was so far improved as to be able to hold his pen for twelve hours daily. Other interesting cases are also given in the same periodical for March 30th and April 15th. In one, apparently a unique example of paraplegia was cured by metallo-therapy, without transference; in another, a very obstinate tendency to contraction was overcome by the use of magnets.

Sub-phrenic Pyopneumothorax and Abscesses.

Under the name of sub-phrenic pyopneumothorax, Dr. E. Leyden describes, in the *Zeitschrift für Klinische Medicin*, Band 1, cavities full of air and pus, found beneath the diaphragm, and extending more or less into the thoracic cavity, so as to produce physical signs very closely resembling those of genuine pyopneumothorax. These abscesses may be formed either on the right or on the left side. The mechanism of the origin of these air-containing suppurating cavities is closely connected with a history of perforative peritonitis; they are most frequently the result of perforating ulcers of the stomach or duodenum. Their tendency, when left to themselves is, almost without exception, toward death. It appears that they most frequently perforate the lung; but they may discharge in other ways. Perforation of the stomach or the transverse colon may end favorably. Dr. Leyden's observations have shown him that the diagnosis of sub-phrenic

pyopneumothorax may generally be made with certainty; and the diagnosis is of great practical importance, as life may be saved by operation. The following are, according to Leyden, the diagnostic characters of sub-phrenic pyopneumothorax:—1. The development of the disease is preceded by symptoms of general (perforative) peritonitis or discharges of pus by the bowel. 2. An exudation takes place in the lower part of the thorax (right or left) with symptoms of inflammation; cough and expectoration being absent, at least for a long time. 3. There are distinct symptoms of pyopneumothorax in the lower part of the chest, viz., complete resonance on percussion as far as the border of the ribs, and dullness in the lower and posterior part; in this region the respiratory murmur and vocal fremitus are absent, and metallic tinkling is heard on simultaneous auscultation and percussion; the succussion sound is distinct. 4. At the same time examination shows that the lung above is unaffected, and that it descends during deep inspiration. Beneath the clavicle there is vesicular respiratory murmur, and the vocal fremitus reaches as far down as the third or fourth rib. On deeper inspiration, however, the normal respiratory murmur is heard as low down as the fourth or fifth rib; while at the same time all respiratory sound is sharply cut off below this limit. 5. The dullness on percussion, corresponding to the exudation, is rapidly and distinctly altered by changes in the position of the body, but the change is limited to the lower part of the chest (*i.e.*, beneath the diaphragm). 6. The signs of increased pressure in the pleural cavity are either absent or very indistinct. The corresponding half of the thorax is scarcely distended, the heart is but little pushed aside. On the other hand, the liver reaches as low down as the umbilicus, or even lower. 7. In the further progress of the case, any doubt that may have existed as to the diagnosis may be removed by the sudden and abundant expectoration of ichorous pus, indicating perforation into the air passages. 8. Finally, the diagnosis may be confirmed by manometric examination of the pleura. Pfuhl had already remarked that, in puncture, combined with the use of the manometer, when the cannula is in a cavity beneath the diaphragm, inspiration is attended with an increase, and expiration with a diminution of pressure; being the reverse of what occurs when the cannula lies in the pleura.

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

——We have just received the first "Annual Announcement of the St. Paul Medical College," medical department of Hamline University, Minnesota, and we are glad to see that the course of study in this new institution has been extended to four years, the lecture term opening on the first Tuesday in October, and closing on the last Saturday in May.

——A pamphlet containing a report of "Three Cases of Syphilitic Muscular Contraction," extracted from the *American Journal of the Medical Sciences*, for April, 1880, has been sent us by the author, Arthur Van Harlingen, M.D., chief of the Skin Clinic, Hospital of the University of Pennsylvania, and also a reprint from the *Archives of Dermatology*, for April, 1880, containing a report of a "Case of Chronic Inflammatory Tuberculo-vesicular Skin Disease," by the same author.

——"Supply and Demand in its Relation to the Growth, Development and Health of the Human Body," is the title of an address delivered before the Coles County Academy of Medicine and Surgery, at Mattoon, Illinois, March 9, 1880, by V. R. Bridges, M.D., which now comes to us in pamphlet form.

BOOK NOTICES.

The Practitioner's Reference Book. By Richard J. Dunglison, A.M., M.D., Editor of Dunglison's "Medical Dictionary," Secretary of the American Academy of Medicine, etc., etc. Second edition, revised and enlarged. Philadelphia, Lindsay and Blakiston, 1880. Cloth, 8vo, pp. 476. Price $3.50.

In preparing the second edition of this work the author has added materially to its usefulness by the introduction of a large amount of new matter. Among the most important additions made may be mentioned the chapter on "How to Write Metric Prescriptions;" directions as to the Use of the Hypodermic Syringe in diseases in which it is applicable; how to use a Galvanic Battery in Medicine and Surgery; how to apply Trusses to Herniæ; how to use the Clinical Thermometer; how to prepare Stained Sections of Animal Tissues; reference tables of size, weight, and specific gravity of all the organs, etc., of the body; celebrated prescriptions or remedies; Therapeutics of the Bowel Affections of Children; diagnostic tables of the principal fevers; diagnostic tables of Acute Pulmonary Diseases; diagnostic tables of Diseases of the Larynx and Naso-pharynx; diagnostic syllabus of Tumors of the Groin; ready reference table of antidotes on a new plan; rules of medical etiquette, etc., etc. The size of the present volume has thus been increased by 135 pages, without, however, affecting the price of the book. A review of the first edition will be found on page 135, August 18th, 1877, to which our readers are referred for further information. The book is handsomely gotten up.

THE

Medical and Surgical Reporter,

A WEEKLY JOURNAL,

Issued every Saturday.

D. G. BRINTON, M.D., EDITOR.

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THE MEDICAL ASPECTS OF EDUCATION.

III.—Scholastic Education.

The points we wish to bring out in reference to school life are but variations of what we said under "Household Education." The question there was, *Quis custodiat ipsos custodes?* Who shall teach the teachers? Without their intelligent aid it will be vain to expect that the sanitation of school life will be observed. They cannot give such aid, because they neither know its necessity nor its principles. Here lies the duty of the medical profession, and it is an urgent one.

One example will suffice. In a report published not long since, on the public schools of Wisconsin, by Dr. J. T. Reeve, of the State Board of Health, he states that it would seem that the physiological laws that govern the growth and action of the human system should be thoroughly comprehended, especially by teachers and school officers, and that the study of physiology and hygiene should form an essential part of the course pursued in all our public schools; yet as the result of an investigation, made by direction of the Wisconsin State Board of Health, into the extent to which these studies actually are pursued in those institutions, he found that very seldom is any place systematically provided for either in the school curriculum, and that in 5197 out of a total of 5361 school districts in the State (exclusive of independent cities), no text books upon these subjects were in use. The inquiry further revealed the fact that no knowledge of these branches or of the structure of the human body is required as a necessary antecedent to enable a teacher to obtain the third-grade certificate, which is held by seven-eighths of all the instructors in the public schools of Wisconsin.

That this ignoring of a study which is certainly among the most useful of all studies is not in accordance with the dictates of wisdom and prudence, will, we think, be evident to one who attentively examines the sanitary condition of the public schools and those who attend them, in almost any State in the Union. Teachers should not be held qualified for their position unless they know the principles of sanitary science and personal hygiene. They should be required to observe them in their avocation, and explain them to their pupils.

To this should be added a general knowledge of the functions of the body, of the outlines of physiology. This is, in fact, essential to the proper understanding of hygienic laws. It is well remarked by a recent advocate of the more general study of physiology that the more men become acquainted with the structure and functions of their own organism, the more they will fear, shun, and despise ignorant pretenders in the healing art; the more they will hesitate to try upon the body the effects of medicines and remedies with which they have no acquaintance whatever, and that we have here, therefore, the best means of protecting both the public and the profession against quackery. Furthermore, as the engineer, in order to work and preserve his engine, must know something about its construction and actions, so it seems essential that man, in order to make the best use of his body and

preserve it, must know something about its structure and functions. To be sure, men might, if they would, perhaps carry out blindly the laws of health without a knowledge of physiology; but most of us in this age want to know the "why and the wherefore" of things. It is not usually enough to know that health will follow the carrying out of such laws; most of us want to know why and how health follows such a course. Many children even desire to know, and it is desirable they should know, in what way the air is fouled by respiration, and how impurities in the air get into the blood; why it is best to eat slowly of digestible food, and to masticate it thoroughly; and why it is bad to take violent exercise just before or after a full meal. To derive the greatest amount of benefit from exercise, it appears necessary to know something about the construction and action of the muscles, and the effects of exercise upon the circulation and respiration. With a view to perfect cleanliness of body, it is desirable for every one to know something about the structure and functions of the skin. Finally, as a part of even an ordinary education, it seems just as necessary or desirable for one to know something about the human body—the "noblest work of God"—as about the steam engine, the printing-press, or the electric telegraph.

The questions of school architecture, the hours of study, the protection of the eyes, the use of gymnastics and athletic sports, playgrounds, etc., all turn on this fundamental one of health; and here it is that the active intervention of the physician in this vast subject of education becomes imperative, if education is to do the most it can for the race, that is, to exert upon it an organic and permanent beneficial effect.

Notes and Comments.

Therapeutical Notes.

REMEDY FOR CORNS.

Mr. Gezow, an apothecary of Russia, recommends the following in the *Pharmaceutische Zeitung* as a "sure" remedy for corns, stating that it proves effective within a short time and without causing any pain: Salicylic acid, 30 parts; extract of cannabis indica, 5 parts; collodion, 240 parts. To be applied by means of a camel-hair pencil.

FORMULA FOR SORE NIPPLES.

Dr. Howell recommends the following in the *Canada Medical Record*:—

℞. Tannin, ʒj
Sub-nit. bismuth, ʒij
Vaseline, ʒj. M.

Sig.—To be applied constantly when the child is not nursing.

Osteoplastic Resection of the Elbow Joint.

Under this name, Dr. O. Völker describes, in the *Deütsche Zeitschrift für Chirurgie*, Band 12, a temporary resection of the olecranon, the object of which is to make the cavity of the elbow joint freely accessible. He first performed the operation in a case of old imperfect lateral displacement of the left elbow joint, in a boy thirteen years old. The head of the radius projected on the radial side, and the inner condyle of the humerus on the ulnar side. The joint was almost stiff, and sensation and motion were considerably impaired in the region of the ulnar nerve. Before operating, Dr. Völker made an attempt at reduction, but without success. Two parallel incisions were made along the sides of the olecranon, and were joined below by a transverse incision at the level of the articulating surface of the radius; the bone was then sawn through. The adhesions of the ends of the joint to one another were then divided, partly by a knife, partly by a blunt instrument, and the fore-arm could now be replaced. Two splinters of bone lying close to the ulnar nerve, and one which had become adherent to the supratrochlear fossa, were removed; the olecranon was then brought into its normal position. The articulating surface of the head of the radius, which projected a little, required removal. The wound was treated antiseptically, and healed without any other accident than the sloughing of a small piece of skin. Four weeks after the operation passive movements were commenced; the joint could soon be bent beyond a right angle, and almost completely extended, by the voluntary action of the patient. Pronation and supination were quite free; and the disturbances of the ulnar nerve had altogether disappeared. The result of the operation was thus perfect restoration of the form and function of the joint. Dr. Völker believes that osteoplastic resection of the elbow is indicated in cases of irreducible dislocation (recent and old), of foreign bodies introduced into

the joint, of broken-off pieces of articular cartilage and other substances lying free in the joint. He says that it is most important to restore the bony union of the olecranon with the ulna. Antiseptic treatment of the wound is indispensable; and cases in which the olecranon is not certainly intact, as well as most cases of caries, are not fitted for the operation.

The Blood in Febrile States.

M. Hayem, says the *Lancet*, who has added so much to our knowledge of various morbid states of the blood, has lately published some observations on the minute alterations in the mode of formation of the coagulum in various febrile states. When the blood is spread out in a thin layer under the microscope, the corpuscles are seen to assume a special arrangement. The irregular spaces which the rouleaux leave are larger and less numerous than under normal conditions. If, after coagulation, an attempt is made to separate the elements, it is found that the corpuscles are united by extremely fine filaments of fibrine, which cause them to assume very irregular shapes; they present, also, an abnormal viscosity when compressed by the surrounding fibrine. Other changes which the blood presents cannot be, with certainty, ascribed to the inflammatory processes. Even when the pyrexia is high there is no alteration in the dimensions of the red corpuscles. The increase in the number of leucocytes affects equally all forms of pale corpuscles, their mutual proportion being about the same as in normal blood. Nor do these present any structural alterations: their amœboid movements are the same as in health, except that they are somewhat interfered with by the filaments of fibrine which adhere to them. Many "hæmatoblasts" occupy the empty spaces, and, like the red corpuscles, they become more viscous and adherent one to another, and hence quickly form masses, notably larger than those seen in normal blood. Very soon a reticulum appears, considerably denser than in other circumstances, the constituent filaments being thicker and closer than those of normal blood. During this formation the hæmatoblasts have fused together into little blocks of waxy aspect, to which large numbers of fibrils are attached, giving them a characteristic appearance of balls of spines. The excess of fibrine in the blood gives rise to another appearance if the blood is diluted with the liquid used in the ordinary numeration of the corpuscles; minute solid particles become visible to the naked eye in the mixture, an appearance never seen with normal blood. These particles are composed of hæmatoblasts, surrounded by a finely granular or fibrillar substance, to which many leucocytes and red corpuscles adhere. These changes in the blood may be found, although in a less marked degree, in cases of chronic as well as in acute inflammation.

Influence of Electricity on Bacteria.

According to the *Medical Press and Circular*, June 9th, 1880, some new experiments with regard to the influence of electricity on bacteria have been published by Professor Cohn, who adopted the method of sowing with bacteria a sterilized mineral nutritive solution, subjecting them to electric currents, and noting the results. A Marie-Davy flask element he finds to exert (according to strength of current) either no influence on the increase of bacteria, or merely a retardative influence. On the other hand, the current from two powerful elements sterilized the nutritive solution completely at the positive pole in twelve to twenty-four hours, so that afterward the bacteria introduced did not increase. At the negative pole the action was weaker, the liquid not completely sterilized. At neither of the poles were the bacteria killed, and when brought into another nutritive liquid they developed normally; on the other hand, yeast cells, and mycelium fungus brought into the liquid that was sterile for bacteria, increased plentifully at the positive pole. A battery of five strong elements killed the bacteria distributed in the liquid within twenty-four hours, and sterilized the liquid of both poles.

Japanese Inundation Fever.

Under this name (*Japanische Fluss-oder Ueberschwemmungsfieber*), E. Baelz and Kawakami describe, in Virchow's *Archiv*, Band 78, a disease hitherto unknown to Europeans, which breaks out every year, in July and August, in parts that have been inundated during the spring. It is an acute, non-contagious disease, with a typical febrile course, commencing with limited necrosis of the skin, and leading to swelling of the lymphatic glands and a cutaneous eruption. There are no special premonitory symptoms. The onset of the disease takes place generally after six days' residence in the infected locality, with rigors, headache, loss of appetite, and great feeling of debility. The lymphatic glands soon become painful, and the skin in their vicinity rapidly becomes necrosed. This, with the resulting ulcer, is the specific and characteristic sign of the inundation fever, and is never absent.

The patients are abnormally sensitive to draughts of air and to the contact of water. The temperature gradually rises, until at the end of the first week it reaches 104° Fahr.; it then remains at this height for eight days, and gradually returns to the normal in the course of the third week. The frequency of the pulse is slightly increased during the fever. A sudden increase in the frequency of the pulse in the third week, when the temperature is normal, is a warning of severe symptoms. On some part of the skin there is formed a dry scab, which, in being thrown off, leaves a crateriform ulcer. The neighboring lymphatic glands swell and become tender to the touch. Catarrh of the conjunctiva is always present. On the fourth or sixth day there generally appears a papular, non-suppurating eruption, first on the face, then on other parts of the body. The exanthem indicates that the disease has reached its acme, and lasts from four to six days; it is attended with continued high fever. At the end of the second week the fever begins to remit, and convalescence rapidly sets in. The mortality is about fifteen per cent. The authors regard the disease as of miasmatic origin. Salicylate of sodium in small doses appears to be useful, while quinine has no effect. In order to prevent the development of the poison, the authors recommend the cultivation in the infected districts of the *Paulownia imperialis*, which possesses many advantages over the eucalyptus.

Correspondence.

"Conservative Midwifery."

Ed. Med. and Surg. Reporter:—

I have read with great pleasure the able article of George Hamilton, M.D., entitled "Conservative Midwifery." He refers to a paper in the *Pacific Medical and Surgical Journal*, by Henry Gibbons, Sr., M.D., "A Protest Against Meddlesome Midwifery." In winding up, he expresses a "hope that other authors, lecturers, and practitioners may come to his support in this effort in behalf of a more conservative practice than now prevails." "When duty calls 'tis ours to obey." From a conviction of duty in behalf of poor woman, I venture, in this off-hand communication, to fully endorse all that Dr. Hamilton says in support of his position, and wish that I could read Dr. Gibbons' paper also, for I have no doubt of giving it my full approval, if I should. In my reading of opinions in favor of the frequent use of the forceps, and reports of experience in the same, I have not yet been convinced that artificial means should be resorted to to facilitate labor, when, to use a homespun expression, "The mother was getting along very well, and everything going on naturally."

I am well acquainted with a great many physicians in this part of Louisiana, and quite a number in New Orleans and from several different sections of the State, having been a practitioner here for nearly twenty-eight years. The intelligence and success of the Louisiana physicians will compare favorably with those of any part of the country; and so far as my acquaintance with their practice is concerned, I believe there has been but little necessity of instrumental delivery. In fact, a great deal of the obstetrical practice in many localities is in the hands of negro midwives, who could not and would not attempt to use forceps, but in lingering cases promptly send for a doctor; and still the cases get along well. The most delicate, as Dr. Hamilton says, get along the easiest.

My father practiced in New York and Ohio for nearly sixty years, and wherever he lived he always had a large obstetrical practice; his preceptor and father-in-law, a prominent physician in New York for I do not know how long, taught him, as he taught me, that "meddlesome midwifery could not be too much condemned." I only mention this, as Dr. Hamilton refers to Dr. Gibbons, and his long experience, that in many years of extensive practice, although the use of forceps was well known, artificial interference was deemed necessary only in exceptional cases.

I think Playfair, in his edition of Midwifery, of 1880, in describing forceps, page 465, makes a very sensible remark: "They may be described as a pair of artificial hands, by which the fœtal head may be grasped and drawn through the maternal passages by a *vis a fronte*, when the *vis a tergo* is deficient."

Yes, "when the *vis a tergo* is deficient." Of that, however, I think the physician should be able to judge, and well satisfied, before he makes application of his "artificial hands," and thereby causes to his patient unnecessary alarm, and incurs the risk of injury, perhaps irreparable, to one or both, mother and child.

Of course, with many people, all the display and extra manipulations, if all turns out right, has its effect in advancing his interests; and occasionally a poor fellow steps from the ditch of poverty up into the road to wealth, by accidentally giving prompt relief to a suffering patient; but this does not excuse the teaching of that which is likely to lead many to venture a practice resulting in harm. Conservative versus meddlesome midwifery should still continue to be thoroughly impressed upon the mind of the student by authors and teachers.

O. P. Langworthy, M.D.

Clinton, La., July 2, 1880.

News and Miscellany.

The Manufacture of Iodine in South America.

According to the London *Medical Record*, June 15th, 1880, the province of Tarapaca, in Peru, now contains eight manufactories in full work, which produce annually 140,000 kilograms of iodine. Three other manufactories are in course of construction, and the production of iodine in 1879 has attained from 150,000 to 200,-

000 kilograms. Different processes are used to extract iodine from the waters of saltpetre. The first process consists in precipitating the iodine with a determined quantity of sulphate of sodium, and the iodine is afterward extracted, after having been washed, filtered, etc. The second method consists in adding to the water either sulphate or bisulphate of sodium, until the iodine is transformed into iodohydric acid, which is precipitated by the aid of a solution of chloride of copper. In the first method the crystallization process is used, then the mother waters are distilled with a quantity of bisulphate of sodium equivalent to the density of the iodine.

Extraordinary Fecundity.

According to a paragraph in *La France Médicale*, a woman, whose name and address are given, was several months pregnant when she was seized with colicky pains. Attributing them to ordinary causes, she went into her vineyard, and was profoundly astonished to discover presently that she had been confined. Dr. Watering, of Maregnac, was called to her, and found that she had given birth to eight children, perfectly formed. They were enclosed in a sac, and had apparently perished from mutual pressure during their growth. The mother did well.

Death of a Physician.

A special dispatch to the Cincinnati *Gazette* says Dr. R. M. Hills, of Covington, Ind., committed suicide on the 5th instant, by shooting. He was a leading physician in that county for the last twenty-five years, and was wealthy. Ill-health and consequent despondency are supposed to have been the causes that led to the act.

OBITUARY NOTICES.

—Dr. Manly Emanuel died on the 2d inst., at his residence, No. 1324 Green street, at the age of 86 years. He was born in Devonport, England, and pursued his medical studies at St. George's Hospital, London, at which place he also graduated in 1816. He then settled there, but removed to this country in 1836, and took up his abode at Linwood, Delaware county, where he resided about thirty years. He removed to this city about ten years ago, where he remained up to the time of his death. He was a member of the American Medical Association and a Fellow of the Royal College of Surgeons, of London. He was President of the Delaware County Medical Society, a position which he filled about sixteen years, and was President of the Board of School Directors in that place. He at one time held the position of United States Examining Surgeon for pensioners, and was a justice of the peace for Delaware county during his residence in that section of the country.

—Alfred Swaine Taylor, M.D., F.R.S., the well-known medical jurist and toxicologist, died at his residence in St. James' Terrace, Regent's Park, on the 27th of May last. He was born in Northfleet in 1806, was educated at a private school, and studied medicine and surgery, under Sir Astley Cooper and Mr. J. H. Green, at the Hospitals of Guy's and St. Thomas'. After attending the medical schools of France, Germany, and Italy, he took the M.R.C.S. Eng., in 1830, and the M.D. St. And., in 1852, and in the following year was elected to the Fellowship of the London College of Physicians. Dr. Taylor was the first occupant of the chair of Medical Jurisprudence at Guy's Hospital, an appointment which he held till within a short time of his death. It was in connection with this subject that his name was known all over the world, his works on "Poisons," "Medical Jurisprudence," and "Chemistry" being justly esteemed as standard treatises. As an authority in medico-legal questions his loss will be keenly felt by a large section of the community, while as a trusted physician and friend the place he has left vacant will not easily be filled.

QUERIES AND REPLIES.

Dr. Webb J. Kelly, of Galion, Ohio, writes, in reply to the query of Dr. J. M. B., of Pa.:—

Use infusion belladonna until the physiological effects are noticed. Give the patient all the milk he will drink. Have often found that infusion of tobacco will effect a cure when everything else has failed.

Dr. D. P. Boyer, of E. Palestine, recommends—

℞. Ung. hydr., ℥j.
Pulv. camph., ʒj. M.

stating that he has used it for many years, with invariable success.

Drs. T. and B., of N. Y., think that a strong solution of nitrate of silver, applied over the whole organ twice daily, until the patient objects on account of pain, will prove effectual.

Dr. J. M. Keller, of Hot Springs, Ark., thinks that speedy relief will be obtained by injecting the scrotum, night and morning, with one-fourth grain of morphia, and by getting an ordinary toy balloon and stretching it over the testicle, taking the precaution to see that the neck does not bind too tightly around the cord and vessels. It is unnecessary to remove it to inject the morphia, as the needle easily penetrates. Blistering, rubefacients, poultices, hot and cold bags, should all be discarded. They are, at best, only excitants.

MARRIAGES.

BOARDMAN—GRISWOLD.—In Morrisville, Vt., June 3d, by Rev. W. A. Bushee, Dr. H. S. Boardman, of Woodstock, and May Griswold, of Morrisville.

BROWN—LESTER.—At the residence of the bride's parents, on the evening of June 22d, by the Rev. Albert B. Simpson, Dr. Charles H. Brown and Annie M., daughter of Andrew Lester, Esq., all of New York.

DEATHS.

MARCY.—In Cape May City, New Jersey, June 30th, Mrs. Thankful B., wife of Dr. Samuel S. Marcy, in the 80th year of her age.

ROGERS.—June 25th, at 3 A.M., at his late residence, near Covington, Ky., Dr. M. Rogers, in the 84th year of his age.

STEBBINS.—At Geneva, N. Y., on Wednesday, June 30th, Francis Matilda, wife of James H. Stebbins, M.D., and youngest daughter of the late Jacob and Frances Lansing Sutherland.